

In the Claims:

1. (original) A method for determining the distance between two transmitting and receiving stations (1, 2), characterized in that

in each transmitting and receiving station (1, 2) a transmission signal (S1, S2) is generated and is transmitted as a series of microwave pulses having a predefined pulse repetition frequency (fp1, fp2) to the respective other transmitting and receiving station (2, 1) and is received thereby in the form of a received signal (E2, E1), said pulse repetition frequencies (fp1, fp2) of the transmission signals (S1, S2) varying according to a predefined differential frequency value (fd),

in each transmitting and receiving station (1, 2) the coincidence of pulses of the transmission signal (S1, S2) sent by the respective transmitting and receiving station (1, 2) and the received signal (E1, E2) is detected as a coincidence event,

for each transmitting and receiving station (1, 2) two numbers of pulses (m(i), n(i), p(j), q(j)) allocated to the respective transmitting and receiving station (1, 2) are determined, which as a transmission pulse number (m(i), q(j)) and as a received pulse number (n(i), p(j)) represent the number of the pulses transmitted and received by the respective transmitting and receiving station (1, 2) at the point in time of a coincidence event,

26           the distance between the transmitting and receiving  
27       stations (1, 2) is calculated from the numbers of pulses  
28       ( $m(i)$ ,  $n(i)$ ,  $p(j)$ ,  $q(j)$ ).

1       2.   (original) A method according to claim 1, characterized in  
2       that for each transmitting and receiving station (1, 2) the  
3       time interval ( $a+b$ ,  $b-a$ ) between the first pulse  
4       transmitted from the respective transmitting and receiving  
5       station (1, 2) and the first pulse received by the same  
6       transmitting and receiving station (1, 2) is determined  
7       from the numbers of pulses ( $m(i)$ ,  $n(i)$ ,  $p(j)$ ,  $q(j)$ )  
8       determined for the respective transmitting and receiving  
9       station (1, 2) and in that the distance between the  
10      transmitting and receiving stations (1, 2) is calculated by  
11      summation of the determined time intervals ( $a+b$ ,  $b-a$ ).

Claims 3 to 14 (canceled).

[REMARKS FOLLOW ON NEXT PAGE]